

In re Patent Application of:
Pettis, Rodney L.

Serial No. 10/760,337

AMENDMENT TO THE CLAIMS

Please enter the following amendments to the claims:

1. (Original) A combination product and shrink-wrap packaging film having enhanced optical and mechanical properties so that the product can be seen more clearly through the packaging film and the packaging film is not punctured easily when an outside force is applied thereto, the combination comprising:

a product; and

a shrink-wrap packaging film contacting and substantially surrounding the product and shrunk thereon, the packaging film comprising a first outermost layer of elastomer, a second inner layer of polyolefin overlying and abuttingly contacting the first outermost layer of elastomer, and a third outermost layer of elastomer overlying and abuttingly contacting the second inner layer of the polyolefin so that the second inner layer of polyolefin is positioned between the first and the third outermost layers of elastomer, the shrink-wrap packaging film having enhanced optical and mechanical properties for a selected overall packaging film gauge thickness to allow the product to be seen more clearly through the packaging film and to increase modulus for the packaging film.

2. (Original) A combination product and shrink-wrap packaging film according to Claim 1, wherein the elastomer comprises a styrene butadiene copolymer, the polyolefin is selected from the group consisting of polyethylene and polypropylene, and the increase in modulus allows the packaging film to be readily usable with packaging machinery at relatively high speeds and provides packaging film having preselected optical and mechanical properties.

3. (Original) A combination product and shrink-wrap packaging film according to Claim 1, wherein the elastomer comprises at least one of the following compounds: polymethylpentene, polybutylene, polyisobutylene, ethylene propylene diene monomer terpolymer, styrene butadiene styrene copolymer, styrene ethylene butylene copolymer, styrene isoprene styrene copolymer, polybutene-1, isobutylene rubber, methyl acrylate butadiene styrene copolymer, acrylonitrile butadiene styrene copolymer, acrylonitrile alkylacrylate butadiene styrene copolymer, methyl

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methacrylate alkyl acrylate styrene copolymer, and methyl methacrylate alkyl acrylate butadiene styrene copolymer.

4. (Original) A combination product and shrink-wrap packaging film according to Claim 1, wherein the polyolefin comprises at least one of the following compounds: polyethylene homopolymer, polypropylene homopolymer, ethylene/ α -olefin copolymer, propylene/ethylene copolymer, and ethylene/unsaturated ester copolymer.

5. (Original) A combination product and shrink-wrap packaging film according to Claim 1, wherein the overall shrink-wrap packaging film gauge thickness is in a range of about 0.5 to about 3 mil so that the shrink-wrap packaging film is more economical to manufacture without a reduction in clarity or strength of the shrink-wrap packaging film.

6. (Original) A combination product and shrink-wrap packaging film according to Claim 5, wherein the first outermost layer of elastomer is in a range of about 10% to about 25%, the second inner layer of polyolefin is in a range of about 50% to about 80%, and the third outermost layer of elastomer is in a range of about 10% to about 25% of the overall shrink-wrap packaging film gauge thickness.

7. (Original) A combination product and shrink-wrap packaging film according to Claim 5, wherein the enhanced optical properties comprises a haze in a range of about 1 % to about 10% so that the shrink-wrap packaging film is clear and the product can be seen easily through the shrink-wrap packaging film once the shrink-wrap packaging film is heated to securely restrain the product with the shrink-wrap packaging film.

8. (Original) A combination product and shrink-wrap packaging film according to Claim 7, further including indicia on the product so that the indicia can be seen more clearly through the shrink-wrap packaging film without the necessity of removing the shrink-wrap packaging film.

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9. (Original) A combination product and shrink-wrap packaging film according to Claim 7, wherein the enhanced optical properties comprise a 45° gloss in a range of about 70% to about 110% so that the shrink-wrap packaging film is shiny and the product can be seen easily through the shrink-wrap packaging film once the shrink-wrap packaging film is heated to securely restrain the product within the shrink-wrap packaging film.

10. (Original) A combination product and shrink-wrap packaging film according to Claim 9, further including indicia on the shrink-wrap packaging film so that the combination product and shrink-wrap packaging are more aesthetically pleasing to consumers.

11. (Original) A combination product and shrink-wrap packaging film according to Claim 1, wherein the enhanced mechanical properties comprise a tensile modulus in a range of about 50,000 psi to about 120,000 psi so that the shrink-wrap packaging film is readily usable with packaging machinery at relatively high speeds.

12. (Original) A combination product and shrink-wrap packaging film according to Claim 11, wherein the enhanced mechanical properties further comprise a tensile strength in a range of about 2000 psi to about 3500 psi so that the shrink-wrap packaging film can withstand forces applied thereto relatively heavy loads being placed upon the shrink-wrap packaging film.

13. (Original) A combination product and shrink-wrap packaging film according to Claim 1, wherein the enhanced mechanical properties comprise a measurement of shrink in a transverse direction in a range of about 0% to about 60% and in a machine direction in a range of about 60% to about 90% so that the shrink-wrap packaging film shrinks sufficiently to securely restrain the product within the shrink-wrap packaging film.

14. (Original) A combination product and shrink-wrap packaging film according to Claim 13, wherein the enhanced mechanical properties comprise a dart impact strength in a range of about 300 grams to about 1000 grams so that the shrink-wrap packaging film is not punctured easily when an outside force is applied thereto.

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15. (Original) A packaging film having enhanced optical and mechanical properties so that a product surrounded by the packaging film can be seen more clearly through the packaging film and the packaging film is not punctured easily when an outside force is applied thereto, the packaging film comprising:

a first layer of a sheet of elastomer;

a second layer of polyolefin having a first surface abuttingly contacting a first surface of the first layer of the sheet of elastomer; and

a third layer of a sheet of elastomer abuttingly contacting a second surface of the second layer of polyolefin so that the second layer of polyolefin is positioned between the first and third layers of elastomer, the packaging film having enhanced optical and mechanical properties for a selected overall packaging film gauge thickness so that a product surrounded by the packaging film can be seen more clearly through the packaging film.

16. (Original) A packaging film according to Claim 15, wherein the increase in modulus provides a packaging film that is readily usable with packaging machinery at relatively high speeds and provides packaging film having preselected optical and mechanical properties.

17. (Original) A packaging film according to Claim 15, wherein the polyolefin is selected from the group consisting of polyethylene and polypropylene and the elastomer comprises a styrene butadiene copolymer.

18. (Original) A packaging film according to Claim 15, wherein the elastomer comprises at least one of the following compounds: polymethylpentene, polybutylene, polyisobutylene, ethylene propylene diene monomer terpolymer, styrene butadiene styrene copolymer, styrene ethylene butylene copolymer, styrene isoprene styrene copolymer, polybutene-1, isobutylene rubber, methyl acrylate butadiene styrene copolymer, acrylonitrile butadiene styrene copolymer, acrylonitrile alkylacrylate butadiene styrene copolymer, methyl methacrylate alkyl acrylate styrene copolymer, and methyl methacrylate alkyl acrylate butadiene styrene copolymer.

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19. (Original) A packaging film according to Claim 15, wherein the polyolefin comprises at least one of the following compounds: polyethylene homopolymer, polypropylene homopolymer, ethylene/ α -olefin copolymer, propylene/ethylene copolymer, and ethylene/unsaturated ester copolymer.

20. (Original) A packaging film according to Claim 15, wherein the overall packaging film gauge thickness is in a range of about 0.5 to about 3 mil.

21. (Original) A packaging film according to Claim 20, wherein the first layer of the sheet elastomer is in a range of about 10% to about 25%, the second layer of polyolefin is in a range of about 50% to about 80%, and the third layer of the sheet of elastomer is in a range of about 10% to about 25% of the overall shrink-wrap packaging film gauge thickness.

22. (Original) A packaging film according to Claim 20, wherein the enhanced optical properties comprise a haze in a range of about 1 % to about 10% and a 45° gloss in a range of about 70% to about 110%.

23. (Original) A packaging film according to Claim 15, wherein the enhanced mechanical properties comprise a tensile modulus in a range of about 50,000 psi to about 120,000 psi.

24. (Original) A packaging film according to Claim 23, wherein the enhanced mechanical properties further comprise a tensile strength in a range of about 2000 psi to about 3500 psi.

25. (Original) A packaging film according to Claim 15, wherein the enhanced mechanical properties comprise a measurement of shrink in a transverse direction in a range of about 0% to about 60% and in a machine direction in a range of about 60% to about 90%.

26. (Original) A packaging film according to Claim 15, wherein the enhanced mechanical properties comprise a dart impact strength in a range of about 300 grams to about 1000 grams.

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27. (Original) A packaging film comprising a first layer of a sheet of elastomer, a second layer of polyolefin having a first surface abuttingly contacting a first surface of the first layer of the sheet of elastomer, and a third layer of a sheet of elastomer abuttingly contacting a second surface of the second layer of polyolefin so that the second layer of polyolefin is positioned between the first and third layers of elastomer, the packaging film having a 45° gloss in a range of about 70% to about 110%.
28. (New) A packaging film having enhanced optical and mechanical properties, the packaging film comprising:
- a first layer of a sheet of elastomer;
 - a second layer of polyolefin having a first surface abuttingly contacting a first surface of the first layer of the sheet of elastomer; and
 - a third layer of a sheet of elastomer abuttingly contacting a second surface of the second layer of polyolefin so that the second layer of polyolefin is positioned between the first and third layers of elastomer, the packaging film also having a measurement of shrink in a transverse direction in a range of about 0% to about 60% and in a machine direction in a range of about 60% to about 90%, a tensile modulus in a range of about 50,000 psi to about 120,000 psi, and a tensile strength in a range of about 2000 psi to about 3500 psi.
29. (New) A packaging film according to Claim 28, wherein the elastomer comprises a styrene butadiene copolymer, the polyolefin is selected from the group consisting of polyethylene and polypropylene, and the increase in modulus allows the packaging film to be readily usable with packaging machinery at relatively high speeds and provides packaging film having preselected optical and mechanical properties.
30. (New) A packaging film according to Claim 29, wherein the elastomer comprises at least one of the following compounds: polymethylpentene, polybutylene, polyisobutylene, ethylene propylene diene monomer terpolymer, styrene butadiene styrene copolymer, styrene ethylene butylene copolymer, styrene isoprene styrene copolymer, polybutene-1, isobutylene rubber, methyl acrylate butadiene styrene copolymer, acrylonitrile butadiene styrene copolymer,

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acrylonitrile alkylacrylate butadiene styrene copolymer, methyl methacrylate alkyl acrylate styrene copolymer, and methyl methacrylate alkyl acrylate butadiene styrene copolymer.

31. (New) A packaging film according to Claim 30, wherein the polyolefin comprises at least one of the following compounds: polyethylene homopolymer, polypropylene homopolymer, ethylene/ α -olefin copolymer, propylene/ethylene copolymer, and ethylene/unsaturated ester copolymer.

32. (New) A packaging film according to Claim 28, wherein the packaging film has a haze in a range of about 1 % to about 10% so that the packaging film is clear and product can be seen easily through the packaging film.

33. (New) A packaging film according to Claim 32, wherein the packaging film has a 45° gloss in a range of about 70% to about 110% so that the packaging film is shiny and product can be seen easily through the packaging film.

34. (New) A packaging film according to Claim 28, wherein the packaging film has a film gauge thickness in a range of about 0.5 to about 3 mil.

35. (New) A packaging film according to Claim 28, wherein the packaging film has a dart impact strength in a range of about 300 grams to about 1000 grams so that the packaging film is not punctured easily when an outside force is applied thereto.